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Challenges and strategies for improving the rural family physician program in Iran

Ahmad Shirjang[1], **Soad Mahfoozpour**[1,2]✉, **Iravan Masoudi Asl**[3], **Leila Doshmangir**[4,5]

[1]Department of Health Services Management, South Tehran Branch, Islamic Azad University, Tehran, Iran
[2]Safety Promotion & Injury Prevention Research Center, Shahid Beheshti University of medical Sciences, Tehran, Iran
[3]Department of Health Services Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
[4]Health Services Management Department, Health Services Management Research Center, Iranian Center of Excellence in Health Management, School of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran
[5]Social Determinants of Health Research Center, Health Management and Safety Promotion Research Institute, Tabriz University of Medical Sciences, Tabriz, Iran

✉**Corresponding author**
Department of Health Services Management, South Tehran Branch,
Islamic Azad University, Tehran, Iran /
Safety Promotion & Injury Prevention Research Center,
Shahid Beheshti University of medical Sciences, Tehran, Iran

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ABSTRACT

Background: Family physician is a corrective action for completing PHC and an important development in providing health services in Iran which by its implementation, it is emphasized on the need to reform, supplement and expand the program. In this study, we seek to identify the key challenges of the rural family physician to provide practical solutions to solve them. *Materials and Methods:* This is a qualitative study conducted with a review of documents and interviews. Documents were systematically selected documents and key informants have been selected with Non-probability methods. 26 In-depth semi-structured interviews were conducted. Data were analyzed using Maxqda software by deductive content method. *Results:* The results show that for the full implementation of the rural family physician there are still essential challenges in the area of governance such as the lack of mandatory rules for specialized levels for Observe the ranking; in the area of financing such as lack of impact of physician activity on wages; in the area of education such as the inconsistency of the content of medical education with the family physician, in the area of service providers such as reluctance of family physicians to care plans; in the area of service recipients such as self-referral without a doctor's opinion: and in the area of evaluation such as insufficient supervision of insurer organizations. *Conclusion:* Given the national and international emphasis on PHC continuity and providing family physician-centered services, comprehensive and systematic planning of remedial actions should be undertaken to address existing challenges.

Keywords: Family Physician, PHC, Health Care.

1. INTRODUCTION

Health is a universal right and is one of the duties of all governments for the people (Park, 2005). The World Health Organization at the Ninth World Conference by agreement the States Parties has recognized "Health for All" as a framework for development and evolution to achieve the 2030 Sustainable Development Agenda with the agreement originality of (PHC) (Primary Health Care) and access to ''Universal health coverage'' was taken into account (Van Lerberghe, 2008). In Iran, due to the importance of addressing people's health in constitution, access to health services is emphatic (Parsapoor et al., 2014). Good practices for promoting community health have been done including the expansion of health networks in order to establish the PHC in the 60s which has made progress in health indicators (Asaei, 2014). Implementation of the Family Physician Program and Referral System in Iran has also been put on the agenda in order to promote health and achieve Iranian 1404 vision, and has been emphasized (Rahimi & Nabilou, 2009). In the Law of the Sixth Five-Year Plan of Economic, Social and Cultural Development, Family Physician System is considered as requirement and the Ministry of Health is committed to implementing "Comprehensive system of services Health and public" with Priority prevention and reliance on primary health care, focused on a referral system and family physician, service levelling and electronic health record formulation.

The Family Physician Program is the most important strategic plan for any country's health system, which in addition to providing the services that people needs; it also limits the potential for abuse of people's health needs. The basics and principles of the Family Physician Program are the same as PHC principles, including justice, cross-sector collaboration, public participation, and the use of appropriate technology (Mehryar, 2004). Fairness, quality, efficiency, increasing accountability in the health market, reducing unnecessary costs, increasing poor access to health services and increasing service coverage are the goals of the family physician program (Nasrollahpour Shirvani et al., 2010; Takian et al., 2013). Family physician strategy, service levelling and referral system are the main solution to health service problems.

The Rural Family Physician Program in Iran has been implemented in villages and towns under 20,000 since 2005. The government has been obliged to provide residents of these areas, access to health services through the Family Physician Program and the referral system. Development of Rural Family Physician Program is the Strength of Iran's PHC System in the Region (Mehryar, 2004; Nasrollahpour Shirvani et al., 2010). Numerous studies have been investigated different aspects of rural family physician in Iran, but since family physician program has not been carried out as planned, the reform, completion and expansion of the program in government development programs and approvals laws and also the expansion of experts, have also been emphasized. Therefore, in this study we intend to extract the basic challenges of the rural family physician program and to provide practical solutions to these challenges so that we can take an effective step in achieving the country's health goals and preparing the preparations for preparing the Comprehensive Implementation Plan for the Urban Family Physician Program.

2. MATERIALS AND METHODS

Study design

This research is a qualitative study that is done by using document review and interview (Fig. 1).

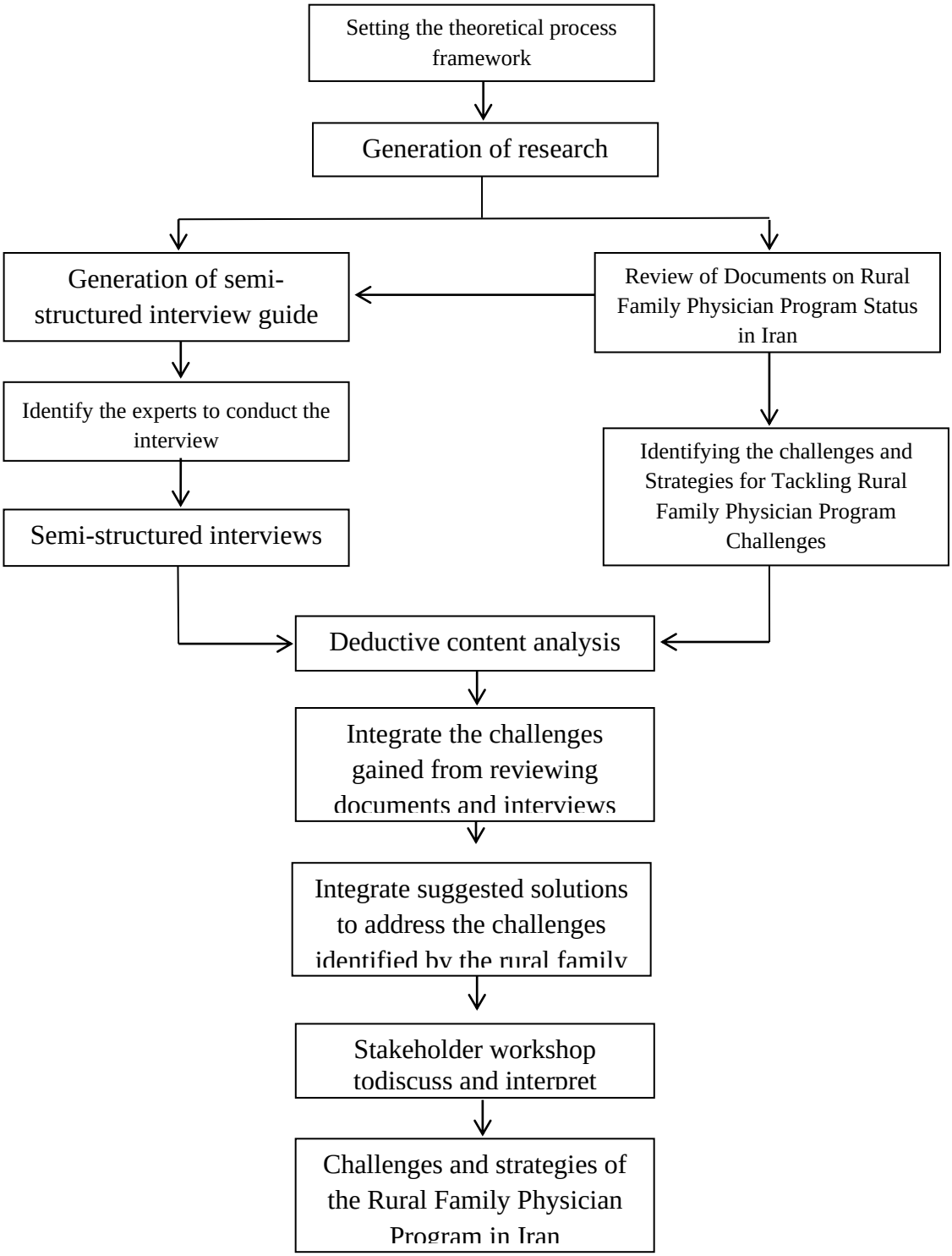

Figure 1 Flowchart of research methodology

Collecting data

Documentary Method (Documentation Review)

Selected as a qualitative method to strengthen the interview method in this study, in using this method in systematically way those documents containing information on the subject under study, including national and international books and instructions from the subsidiary units of the Ministry of Health and database of various organizations such as government, parliament, and the Ministry of Health have been screened using Scott criteria (determining authenticity, validity, representation, and meaningful). Finally, the city's health network books, guidelines, and general principles in the development plans and rural family physicians instructions and national documents include a comprehensive national health map, a primary health care promotion policy, and a sixth development plan that describes the structure and levels network service delivery and the position of the family physician in this system, and international documents including the strategy of cooperation of the Islamic Republic of Iran with the World Health Organization has been studied (World Health Organization, 2010).

Interview

Interviews were based on a pre-arranged guide. Interview questions were designed using the documentation review findings and based on the research team's views. The questions were designed to cover all aspects of the subject. The validity of the questions was assessed by pilot four interviews. The study was conducted from July till December in 2018. The interviews were conducted in-depth and individually structured. The reason for choosing was the ability to identify and discover the opinions, and attitudes of the experts on the subjects under study (Krippendorff, 2004). The study population included policy makers, academics, managers, planners, health professionals and PHC staff at national, provincial, and city levels. Participants were selected by purposive sampling and continued until data saturation. Location of the interviews, workplace of interviewers at universities, the research and administrative centers were staffed at various levels, and an action should have done with coordinated a week ago with telephone call or visited in-person about the purpose of the study. The duration of the interviews varied from half an hour to one and a half hours. Interviews were recorded with the permission of the participants. A total of 26 in-depth individual interviews were conducted. Interview questions were reviewed with the opinion of study team members for completeness and quality improvement and were modified for further interviews if needed.

Data validation

In order to ensure the validity and acceptability of the data, a participant survey was used which after each interview, the transcript was presented to the interviewee for confirmation, and comments were removed or added if necessary, and again coded and analyzed. The four criteria defined by Pope as Credibility, authenticity, transferability, confirmability of data were used to determine the validity of the documentation (Mays & Pope, 2000). Peer review was also used, and codes and themes were reviewed.

Statistical Analysis

Data analysis was performed using the MAXQDA 12 software with deductive content analysis method. The audio files of the interviews were carefully transcribed and typed immediately after the execution, and the resulting texts were read several times. The interviews were sent to the participants for confirmation of the contents of the typed file. In the next step, the interviews were coded and similar codes were conceptually merged. The subthemes created are listed below every theme. This work continued until there were no new subthemes or code or group changes and finally the extract codes were categorized into 6 main themes and 28 subthemes and then analyzed.

Ethics Approval

Ethical approval for this research has been obtained from Ethics Committee of the Tabriz University of Medical Sciences, reference number IR.TBZMED.REC.1398.196.

Ethical considerations

Obtain informed consent from all participants to participate in the study and recording of sound, observe non-disclosure of names and confidentiality of information, and acceptance of the right to withdraw from the study at all stages of implementation. At the beginning of the study, the goal of study was described to the participants.

3. RESULTS

Twenty-six policymakers, academics, and health activists from the Country Health area are participant in the study, of whom 24 were men and 2 women (mean age 45 years). Participants had a career history between 5 and 20 years with a mean of 12±0.7 years. The level of education of this group varied from under diploma to doctorate (Table1).

Table1 Demographic characteristics of participants

Category of interviewees		Number of interviewees
Education level	Lower diploma	1
	Diploma	2
	Associate degree	4
	Bachelor	4
	Master	5
	Doctor of Medicine	4
	PhD	6
Years of professional experience	No. of participants with 5-10 years of working experience	9
	No. of participants with 11-20 years of working experience	17
Title/field of work	Ministry of Health officers	6
	Academic Members of Medical Sciences	4
	Health insurance officers	5
	Health network staff	7
	Health center staff	4

Participants point to the great and effective work of family physicians, the good effects of implementing a nationwide health plan, increasing public access and providing advanced health care services by physicians as complementary health care providers and health workers in timely identification and follow-up of patients, and increased The quality of services was identified and then identified the existing challenges of the rural family physician program and service levelling in the subsequent phases of modification and completion of the program, which resulted in a total of 317 initial codes extracted from the initial analysis of the interviews, which by categorizing these codes into groups; finally 5 main themes and 24 sub-themes, is obtained (Table 2).

Table 2 themes and sub-themes related to the challenges of the FP program

Them	sub-them
Governance and leadership	Formulation and implementation of FM and referral system
	The Role of the Private Sector
	Service insurance coverage mechanism
	Supporting and binding rules
	Type of Services requested
	Health services leveling
	Referral system
	Required infrastructure
	The justification of executive political officials
	The desire and necessity of different groups to deploy the program

Education and Cultivation	Informing and updating people's knowledge and awareness
	Familiarity and coordination of the authorities with the Concept and principles of FM program
	Developing a coordinated medical curriculum
Financing	Payment mechanisms
	Performance based payment
Service Provision	Duration of Family Physician Activity
	Health Team Interactions
	Rural Family Physician's Commitment
	The ability of GPs
	Behavior of service recipients
Monitoring and Evaluation	Material and human resources for evaluation
	Legal authority and support
	Comprehensive and systematic evaluation
	Service buyer independence from the provider

The main themes around issues and challenges in governance and leadership, financing, education and culture building, service provider performance, behavior of service recipients and monitoring and evaluation which each somehow causing problems in the implementation of the program. Most classified sub-themes are described in the domains of Governance/ Leadership and Service Provision (Fig 2).

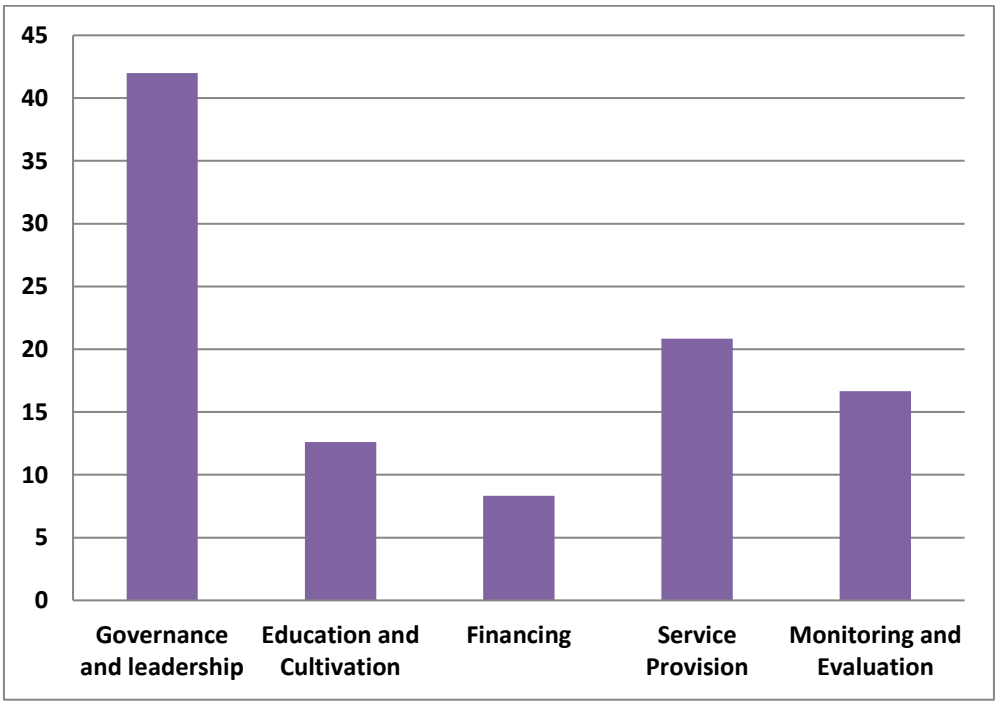

Figure 2 Themes about challenges of the Family Physician program that emerged from analysis of interview transcripts, showing how much they fall into five categories. Themes are summarized in Table 2 in greater detail.

Governance and Leadership

Participants in this category highlighted important challenges, including lack of proper design and inappropriate implementation of a rural family physician, which has made the program inconsistent with PHC: "In our country, the rural family physician has been

inconsistent with the levels, and to have a comprehensive start-up of the ministry and to be connected to the network system has never happened, in general, we have no rural family physician program to cover PHC" (Expert of Provincial Health Deputy).

Also, the low presence of the private sector and their lack of involvement in the provision of first level services have resulted in the failure to implement a comprehensive plan: "There is no need for the service to be provided by the government. The general practitioner is working in his office. We can make contract that he do our service, but we do not do that and we have lack of resources so we cannot provide comprehensive and complete services "(Master of Health Insurance).

Improper design and implementation of the referral system, which leads to a lengthy and time consuming referral path and consequently failure to fully comply with the service classification: "In the current system, you go to the center and you get referred to elsewhere and from there to another. If we are in this cycle once we understand what a complex system we have designed and how much we receive services is a time-consuming process "(Expert of City Health Center).

Not justifying the political authorities and failure to get their support to a rural family physician which has led to lack of anticipation and enact legal requirements and regulatory levers and Control program execution as well as unreasonable pressures on the health system: "A series of serious policy decisions are needed to force all sectors and levels to execute the family physician that should be the policy justification for the program itself" (Master of Science in Medical Sciences University).

Imposing a heavy therapeutic burden on family physicians, this has led to not having an opportunity to provide health care: "Therapeutic Burden is so high that he becomes helpless to examine 100 patients without any restrictions for clients, such as back ache and arthritis, which have no complete recovery, so he won't longer have time for primary health care" (Expert of Health Center).

Not having the necessary infrastructure for the establishment and continuation of the rural family physician, which made the family physician unable to achieve the goals as expected: "We have not yet reached the standard when it comes to providing and defining physicians in terms of population size. This is because we do not include program resources" (MSc in Medical Sciences University).

The lack of legal requirement in compliance levelling with level two and three of service delivery has led to their non-participation in the full deployment of the program: "The lack of binding rules for higher levels of service delivery cause these levels not complementary for PHC. In general, relationships between levels are disrupted. In most cases Level 2 and 3 do not accept PHC at all" (General Practitioner).

Service Provision

Therapeutic Attitude of family physicians which lead to their unwillingness to implement preventive and care programs: "Our family doctors track about 40 percent of our health goals and 60 percent of our therapeutic goals as if we put a therapist at a health center" (Expert of Provincial Health Deputy).

There is a conflict of interest between the private sector and levels two and three of providing services with level one and their disbelief in level 1, services which has made these levels to not complement PHC services: "If they leave Levels 2 and 3 by their own, they will not welcome the leveling of services and referral systems because their interests are at risk, for example, they cannot visit the patient until midnight" (Health Network Chief).

Lack of proper interaction between physician and health team members that made interoperability difficult: "It was supposed to a health worker (Behvarz) to be a member of the health team, not that a health worker would just pay the doctor's bills. Health worker does things and where he couldn't do it, get doctors, midwives and others to do it. This has not happened and has caused the two systems to be separated" (Health worker with experiences).

Lack of accountability and lack of responsibility of rural family physicians for population health, which cause failure to follow up the population health problems which are covered by the physician: "Our Family Physician is not a guardian of health. He is just a Provider who does not get involved in caring and when a person gets sick he goes to the medical center himself and paid for the treatment, there are no consequences for Family Physician (Provincial Health Deputy Technical Assistant).

The frequent changes of family physicians and the instability and lack of sustainability of family physicians in health centers that have resulted in repeated interruptions in the care process of clients and as a result their mistrust of the system: "The family physician should know and monitor the person completely, keep track of their status, while in our centers sometimes the physician changes five or six months, and patient is met by another physician every time he comes in" (MSc in Health Insurance).

Frequent and unnecessary referrals to physicians, especially at specialist levels due to the absence of restrictive reference laws, in addition to wasting health resources, have made it difficult to provide services to people with real needs in: "People can go to the office of specialists or sub-specialists for any simple task, no matter how many times they go without any limitation on their acceptance" (Health Insurance Master).

Level one services insurance coverage for the private sector and other levels by insurer organization, regardless of the levelling and referral path that questions the importance and relevance of the plan: "At the moment, services are offered everywhere. Outside the system, the experiments that are related to the level-one, are accepted as insurance" (MSc in Medical Sciences).

Education and Culture Building

Incompatibility and not being updated of medical education content with PHC and rural family physician, which led general practitioners to be unable to function as rural family physicians: "Our doctors are not trained to work as family doctors. They are trained to treat. These doctors are not Health Manager in fact they are Case Manager" (Academic Member of Medical Sciences University).

Unawareness and inconsistency of Rural Family Physician Program authorities with program rules and regulations that lack of accurate forecasting has made implementation difficult: "From the outset, because the authorities' view of the family physician was not one same, the issues that was expressed at the ministry were related to structure and hardware; how many doctors do we recruit? How much to pay? But what about the quality and the way a Family Physician works and what to do, and how to do? And the content was not discussed at all "(M.Sc. Deputy of Health of the province).

Lack of adequate informs to the public before and during the implementation of the program, which has led to resistance to the program and reluctance to fully deploy the program and referral system: "A program of such magnitude that it encompassed all sectors and levels of the health system and the public was started without the slightest information and after 13 years has not yet been fully implemented and people have overlooked the benefits of the program and are unhappy" (Academic Member of Medical Sciences University).

Financing

Lack of impact of physician performance on the amount of income, which lead to lack of follow-up and physician sensitivity about the health of the people who are covered: "Our family physician does not consider himself or herself to be in charge of population health and is not bound to pursue their health status and this does not affect the physician's income and ultimately receives his or her income from the same population per capita without any deduction" (Technical Deputy of Health Deputy of Province).

An unfair payment system among members of the health team that exacerbates the problems of cooperation and communication between members of the health team: "We didn't see the system, we didn't consider the team, we focused more on the physicians, and the island system took place and the whole system was forgotten" (County Health Assistant).

Monitoring and Evaluation

Lack of comprehensive, effective and effective evaluation and oversight by the Supervisor and Service Buyer organization, which has resulted in a failure to fully pursue and achieve the program objectives despite the resources allocated: "A health insurance supervisor should go to all health centers and health homes to evaluate activities. Firstly, he or she does not have the enough time and on the other hand is not fully familiar with programs and systems so he / she cannot have comprehensive supervision" (Expert of Health Center Staff).

Failure to provide the legal powers, material and human resources needed for the health insurance organization that this deficiency on infrastructure has effect on the comprehensive program evaluation: "The Health Insurance Agency does not have the necessary infrastructure such as adequate legal authority and sufficient human resources to conduct comprehensive oversight" (Health Insurance Chief Expert).

4. DISCUSSION

Findings of this study indicate that the implementation of rural family physician has been effective on health system and service delivery, as well as PHC. It has also been noted in the studies that the development of family physician program in villages and cities with population less than 20,000, is the strength of the PHC system of Iran in the region (Mehryar, 2004; Nasrollahpour Shirvani et al., 2010). However, just like any other program, there are also a number of challenges in this program, which some of the important challenges have been investigated according to the view of health experts. An important challenge in the field of governance and leadership is related to the lack of referral system establishment. The referral system is so important in the health system, such that it has been stated that 80 to 90% of patients can be diagnosed and treated at the first level of health care (Morrell, 1972; Stephen, 1981). But, even several years after the implementation of family physician, the referral system, patients' follow-up, and completion of health records are not still properly implemented (Jabari et al., 2007) that part of it, is related to inappropriate design and

consequently, complex and prolonged referral path. Because in many places, referring to a specialist is far easier than benefiting from the referral system (Khayatzadeh-Mahani & Takian, 2014), as well as the lack of feedback provided by the specialist levels which are mentioned, the most important weaknesses of the rural family physician plan are the inadequacy of the referral system and the lack of adequate feedback from the specialist physician to the family physician (Kashfi et al., 2016). The next major challenge in the field of education and making culture is related to the treatment-centered medical education and its lack of coordination with PHC and family physician, which results in physicians' unawareness of the goals and plans of the rural family physician program. Malekafzali has confirmed that primary health care education is not yet fully taught in the medical education program and graduated physicians, who serve as rural family physicians in health care settings, could damage the integrity of the network system (Malekafzali, 2014). It has also been reported that 22% of managers cited inadequate physician training and lack of physician justification on the program as the weaknesses of rural family physician program (Khayyati et al., 2011). A study in Italy also shows that, 24.2% of Italian family physicians do not have adequate information on health care programs and they are interested in obtaining information and needed the be supported by other members of health team (Simoens et al., 2002). High therapeutic load on rural family physicians and lack of opportunity to provide health care have been cited as the next important issue. In Canada and international researches, there has also been concerns about the extreme volume of workload on family physicians (Pimlott, 2008). Evidence in Iran also indicates that one of the major weaknesses of the program is the high curative work volume of rural family physician (Hoveida, 2014), and participants stated several reasons, such as the low cost of visits and the lack of referral restrictions, that should be considered in programming. Family physicians' reluctance to care programs is another important challenge, which the results of this study has indicated that physicians are more inclined to provide curative services, and are less interested in preventive health care programs and services. Although health is the focus of family physician activities and its overall purpose is to maintain and improve the health of the community, in our country, the Patient-centered is the base of activity in the program (Asefzadeh & Rezapour, 2005). 45% of physicians stated that primary health care is not the priority in this program (Chaman et al., 2011). Also, the conflict of interest in the two and three levels of service delivery and the lack of conviction to the first level service, have been cited as important challenges in program. The experiences of the implementation of family physician in Canada show that family physicians require the expertise of specialists to provide high quality services to patients and investigate all acute, chronic and preventive care services (Pimlott, 2008). But the results show that unfamiliarity and lack of justification in specialists toward program, and on the other hand, the lack of legal requirement to comply with the classification has led to the failure in specialists' participation with the family physician program. Studies also show that 38% of managers and 13.6% of patients cited the problem of not accepting referral items by higher levels as weaknesses of the program (Shahrokh et al., 2013; Janati et al., 2010). The next significant challenge is the frequent changes of family physicians working in the rural family physician program. While family physicians should consider all aspects of medical, cultural, religious, patient, family and society status in patients' care and this requires greater stability and consistency of physicians (Erez et al., 1999). But the findings indicates that, the most important challenge facing the family physician program over many years of its implementation has been the low number and short period cooperation of physicians (Mosa et al., 2015; Yazdi Feyzabadi et al., 2014). Based on the available information, the average of consistency of family physicians in the health centers of the program in universities of medical sciences is 32 months in the northern provinces of Iran (Motlagh et al., 2011), which according to the participants' view, this lack of consistency in patients' care, especially chronic patients, pregnant women, and neurological patients, results in the distrust and their direct referral to more specialized levels for follow-up care. The lack of infrastructure provided for the Rural Family Physician Program, including the lack of a physician and the lack of facilities and resources that have been a concern of professionals since before the program began until today.Based on available information, there approximately 20 to 30% loss in physicians in health and medical centers in average (Motlagh et al., 2011). One of the major weaknesses in the field of health is related to inappropriate management of human resources and lack of balance between demand and supply of health care worker, such that there are surplus and unemployment of human resources in the midwifery group and shortage of human resources in physician group. Another important challenge of the program is the unfamiliarity and inconsistency of the program managers with the goals of the rural family physician which led to lack of attention to the content and quality of the program. Studies have also confirmed that low awareness of national authorities in health projects, such as the rural family physician program is evident (Zanganeh Baygi et al., 2016). Also, the unfamiliarity of people with the program criteria, which is also identified in researches, has been poor the awareness of the rural population about the family physician program (Alidosti et al., 2011). On the other hand, the absence of restrictive laws leads to occasional self-refer cases and unnecessary and frequent referrals to higher levels of services. Studies have also indicated that of the 675 patients referred to level two who received services, 311 (46%) were referred at the request of family physicians (Takian et al., 2013), so they did not show a willingness to full application deployment and referral system. However, in many European countries as well as in some developing

countries such as Kazakhstan, Thailand and China, specialist and hospital services cannot be accessed without referral from a family physician (Brekke et al., 2007). Some of the challenges of the Rural Family Physician program are related to insurance agencies buying services such as covering some services regardless of levelling, in other words, The same services seen at level one, are covered by insurance without any restrictions in the private sector and higher levels, which allows the referral path to put aside by people and specialized levels. Researchers have also confirmed that referrals to specialist and sub-specialists physicians are now very convenient and have no legal prohibition (Khayatzadeh-Mahani & Takian, 2014). Lack of comprehensive and sufficient assessments is another challenge associated with the insurer as a service buyer. The need for efficient evaluation of the health system is not covered because of the importance of the field of work, but according to the results of this study, Assessment of family physician plan by supervisory agencies is not complete and comprehensive. There have also been concerns about the lack of a family physician's control system in studies in Canada and international research (Simoens et al., 2002).

5. CONCLUSION

Given the positive experiences of the international community with the implementation of the Family Physician Program and with national and international emphasis on the continuation of PHC and providing family physician-centered services, it should be planned by planners in regard to solve identified challenges in studies and improve rural family physician services in comprehensive and systematic form. Also periodically studies are done about the Rural Family Physician in the domain of structure and services rendered, to design and implement timely and appropriate interventions. Conduct training for members of health teams, physicians, specialists, staff and environmental experts from the Ministry of Health and affiliated organizations, as well as staff of service centers at levels two and three. Organize information and education programs are held using the mass media for the general public. Complete the electronic health record for the entire population and apply the electronic referral system. By justifying and attracting the support of political authorities, mandatory rules on compliance with the referral system should be adopted by individuals and levels of expertise. Design a mechanism for purchasing services from private sector practitioners and a mechanism for payment based on the provision of health services to members of health teams and assign the evaluation of services to an independent entity outside the Ministry of Health.

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Conflicts of Interest:

The authors declare no conflict of interest.

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